

IN THE CLAIMS:

1. (Previously Amended) A computer-implemented method for enabling access to one or more data sources or targets in a computer system, comprising:

automatically determining one or more data sources or targets connected to the computer;

automatically generating one or more URLs for each of the data sources or targets;

wherein each of the URLs is useable for reading data from the respective data source or writing data to the respective data target.

2. (Previously Amended) The method of claim 1, wherein said data sources and targets include addressable data sources and targets of a hardware device physically coupled to the computer system.

3. (Currently Amended) The method of claim 1, wherein said automatically generating comprises including configuration information in one or more URLs; wherein the configuration information is operable to be used for ~~reading data from the respective data source or writing data to the respective data target~~ configuring the respective data source or data target.

4. (Original) The method of claim 1, wherein said automatically generating comprises:

querying a database to obtain information regarding a data source or data target;

generating URLs based on the obtained information.

5. (Original) The method of claim 1, wherein one or more hardware devices are connected to the computer; wherein said automatically generating comprises:

querying a database to obtain device information regarding one or more of the hardware devices, wherein said querying includes determining the addressable data sources and targets of the device(s);

generating one or more URLs based on the device information and the addressable data sources and targets thus obtained.

6. (Original) The method of claim 5, wherein said device information includes device configuration information; wherein said generating comprises including device configuration information in one or more URLs identifying hardware device data sources or targets.

7. (Original) The method of claim 5, wherein the devices comprise one or more from the group consisting of: DAQ, GPIB, VXI, PXI, and serial.

8. (Original) The method of claim 5, wherein the computer system includes a first device of a first type and a second device of a second type;

wherein said querying a database comprises querying a first database to obtain device information regarding the first device and querying a second database to obtain device information regarding the second device.

9. (Original) The method of claim 5, further comprising:

connecting a new device to the computer;

wherein said querying comprises obtaining device information regarding the new device, wherein said querying includes determining the addressable data sources and targets of the new device;

wherein said URLs include one or more URLs for one or more addressable data sources and targets of the new device.

10. (Original) The method of claim 1, wherein at least one URL is operable to be included in an application program for reading data from a data source or writing data to a data target.

11. (Original) The method of claim 1, further comprising:

providing one or more of the URLs to an application program, wherein the application program is operable to access the data source or data target identified by the URL.

12. (Original) The method of claim 11, wherein the application program includes a data socket client, wherein the data socket client uses the URL to connect to the data source or target identified by the URL and read data from it or write data to it.

13. (Original) The method of claim 1, further comprising:
integrating the URLs with the computer operating system;
wherein the URLs are accessible via a user interface.

14. (Previously Amended) The method of claim 13, wherein the URLs are operable to be provided to application programs via said user interface.

15. (Original) The method of claim 13, further comprising:
editing the URLs using said user interface.

16. (Original) A system for enabling access to one or more data sources or targets, comprising:

a computer system including a CPU and memory;

one or more data sources or targets connected to the computer system;

a URL generation manager comprised in the memory of the computer system which is executable to determine one or more of the data sources or targets and automatically generate one or more URLs for each of the determined data sources or targets;

wherein each of the URLs is useable for reading data from the respective data source or writing data to the respective data target.

17. (Original) The system of claim 16, wherein the system further comprises:

one or more hardware devices connected to the computer system; wherein said data sources and targets include addressable data sources and targets of a hardware device.

18. (Original) The system of claim 17, wherein the devices comprise one or more from the group consisting of: DAQ, GPIB, VXI, PXI, and serial.

19. (Currently Amended) The system of claim 16, wherein one or more of the generated URLs includes configuration information; wherein the configuration information are is operable to be used for ~~reading data from the respective data source or writing data to the respective data target~~ configuring the respective data source or data target.

20. (Original) The system of claim 16, wherein the system further comprises:
one or more plug-in modules comprised in the memory of the computer system; wherein the plug-in modules interface with the URL generation manager; wherein each plug-in module is capable of automatically generating URLs to reference a particular type or class of data source or target.

21. (Original) The system of claim 20, wherein the system further comprises:
one or more hardware devices connected to the computer system; wherein one or more of the plug-in modules is capable of automatically generating URLs to reference data sources or targets of a particular type or class of hardware device.

22. (Original) The system of claim 16, wherein the system further comprises:
one or more databases which each store information regarding a particular type or class of data source or target, wherein said information includes information regarding the locations or addresses of one or more data sources or targets connected to the computer.

23. (Original) The system of claim 22, wherein said database information includes configuration information for one or more data sources or targets connected to the computer.

24. (Original) The system of claim 16, wherein the system further comprises:
one or more hardware devices connected to the computer system;

one or more databases which each store information regarding a particular type or class of hardware device, wherein said information includes device information regarding the locations or addresses of one or more device data sources or targets connected to the computer.

25. (Original) The system of claim 24, wherein said database device information includes device configuration information for one or more device data sources or targets connected to the computer.

26. (Original) The system of claim 16, wherein the system further comprises:

one or more databases which each store information regarding a particular type or class of data source or target, wherein said information includes information regarding the locations or addresses of one or more data sources or targets connected to the computer;

one or more plug-in modules comprised in the memory of the computer system; wherein each plug-in module interfaces with the URL generation manager; wherein each plug-in module obtains information from one or more of the databases regarding a particular type or class of data source or target; wherein each plug-in module is capable of automatically generating URLs to reference a particular type or class of data source or target.

27. (Original) The system of claim 16, wherein the system further comprises:

one or more hardware devices connected to the computer system;

one or more databases which each store information regarding a particular type or class of hardware device, wherein said information includes device information regarding the locations or addresses of one or more device data sources or targets connected to the computer;

one or more plug-in modules comprised in the memory of the computer system; wherein each plug-in module interfaces with the URL generation manager; wherein each plug-in module obtains information from one or more of the databases regarding a particular type or class of device data source or target; wherein each plug-in module is capable of

automatically generating URLs to reference a particular type or class of device data source or target.

28. (Previously Amended) The system of claim 16, wherein the system further comprises computer programs executable to edit the generated URLs; wherein the URL information that is operable to be edited includes configuration information.

29. (Original) The system of claim 16, wherein the system further comprises an application program operable to receive a generated URL, and connect to the data source or target identified by the URL, and read data from it or write data to it.

30. (Original) The system of claim 29, wherein the application program includes a data socket client, wherein the data socket client uses the URL to connect to the data source or target identified by the URL and read data from it or write data to it.

31. (Previously Amended) A memory medium comprising program instructions which implement:

automatically determining one or more data sources or targets connected to ~~the~~ a computer;

automatically generating one or more URLs for each of the data sources or targets;

wherein each of the URLs is useable for reading data from the respective data source or writing data to the respective data target.

32. (Previously Amended) The memory medium of claim 31, wherein said data sources and targets include addressable data sources and targets of a hardware device physically coupled to the computer.

33. (Previously Amended) The memory medium of claim 31, wherein the URLs are operable to be provided to an application program; wherein the application program is operable to connect to the data source or target identified by the URL, and read data from it or write data to it.

34. (Original) The memory medium of claim 33, wherein the application program includes a data socket client; wherein the data socket client uses the URL to connect to the data source or target identified by the URL and read data from it or write data to it.

36. (Original) The memory medium of claim 31,
wherein said automatically determining comprises determining device types of the one or more data sources or targets;
wherein said automatically generating operates to automatically generate the one or more URLs for each of the data sources or targets based on the device types.

37. (Original) The memory medium of claim 31,
wherein said automatically determining comprises determining a first device type of a first data source of the one or more data sources or targets;
wherein said automatically generating comprises:
 automatically determining a first template for the first data source based on the first device type; and
 automatically generating a first URL for the first data source based on the first template.

38. (Original) The memory medium of claim 31,
wherein said automatically determining comprises determining a first device type of a first data source of the one or more data sources or targets;
wherein said automatically generating comprises:
 automatically determining a first template for the first data source based on the first device type;
 automatically determining a first plug-in module for the first data source based on at least one of the first device type or the first template;
 the first plug-in module automatically generating a first URL for the first data source based on the first template.

39. (Original) The memory medium of claim 31,
wherein said data sources and targets include one or more hardware devices physically coupled to the computer;
wherein said automatically determining comprises determining device types of the one or more hardware devices;
wherein said automatically generating operates to automatically generate the one or more URLs for each of the one or more hardware devices based on the device types.

40. (Original) The memory medium of claim 31,
wherein said data sources and targets include one or more hardware devices physically coupled to the computer;
wherein said automatically determining comprises identifying the one or more hardware devices;
wherein said automatically generating comprises:
 querying a database to obtain information regarding the identified one or more hardware devices; and
 automatically generating the one or more URLs for each of the one or more hardware devices based on the obtained information.

41. (Original) The memory medium of claim 31,
wherein the hardware device is a data acquisition device;
wherein the obtained information specifies a number of channels of the data acquisition device;
wherein said automatically generating comprises automatically generating at least one URL for each of at least a subset of the channels of the data acquisition device.

42. (Original) The memory medium of claim 41,
wherein the obtained information specifies characteristics of at least one channel of the data acquisition device;
wherein said automatically generating comprises including information regarding said characteristics in the URL for the at least one channel.

43. (Original) A memory medium comprising program instructions which implement:

automatically determining one or more hardware devices physically coupled to a computer system;

automatically generating one or more URLs for each of the determined one or more hardware devices;

wherein each of the URLs is useable for accessing data from the respective hardware device.

44. (Original) The memory medium of claim 43,

wherein said automatically determining determines a first hardware device, wherein the first hardware device comprises a plurality of data channels;

wherein said automatically generating comprises automatically generating URLs for each of the plurality of data channels.

45. (Original) The memory medium of claim 43,

wherein said automatically determining comprises determining device types of the one or more hardware devices;

wherein said automatically generating operates to automatically generate the one or more URLs for each of the one or more hardware devices based on the device types.

46. (Original) The memory medium of claim 43,

wherein said automatically determining comprises identifying the one or more hardware devices;

wherein said automatically generating comprises:

querying a database to obtain information regarding the identified one or more hardware devices; and

automatically generating the one or more URLs for each of the one or more hardware devices based on the obtained information.

47. (Original) The memory medium of claim 43, wherein the devices comprise one or more from the group consisting of: DAQ, GPIB, VXI, PXI, and serial.

48. (Original) A memory medium, wherein the memory medium is operable to operate in a system comprising a computer system including a CPU and memory and one or more data sources or targets connected to the computer system, wherein the memory medium stores:

a URL generation manager which is executable to determine one or more of the data sources or targets and automatically generate one or more URLs for each of the determined data sources or targets;

wherein each of the URLs is useable for reading data from the respective data source or writing data to the respective data target.

49. (Original) The memory medium of claim 48,
wherein the one or more data sources or targets comprise one or more hardware devices physically connected to the computer system..

50. (Original) The memory medium of claim 49, wherein the devices comprise one or more from the group consisting of: DAQ, GPIB, VXI, PXI, and serial.

51. (Original) The memory medium of claim 48, wherein the memory medium further stores:

one or more plug-in modules, wherein the plug-in modules interface with the URL generation manager; wherein each plug-in module is capable of automatically generating URLs to reference a particular type of data source or target.

52. (Original) The memory medium of claim 48, wherein the memory medium further stores:

one or more databases which each store information regarding a particular type or class of data source or target, wherein said information includes information regarding the locations of one or more data sources or targets connected to the computer.

53. (Original) The memory medium of claim 52, wherein said database information includes configuration information for one or more data sources or targets connected to the computer.

54. (Original) The memory medium of claim 48, wherein the memory medium further stores:

one or more databases which each store information regarding a particular type of data source or target, wherein said information includes information regarding the locations of one or more data sources or targets connected to the computer;

one or more plug-in modules comprised in the memory of the computer system; wherein each plug-in module interfaces with the URL generation manager; wherein each plug-in module obtains information from one or more of the databases regarding a particular type of data source or target; wherein each plug-in module is capable of automatically generating URLs to reference a particular type of data source or target.

55. (Original) The memory medium of claim 48, wherein the system further comprises one or more hardware devices physically connected to the computer system;

wherein the memory medium further stores:

one or more databases which each store information regarding a particular type of hardware device, wherein said information includes device information regarding the locations or addresses of one or more device data sources or targets connected to the computer;

one or more plug-in modules, wherein each plug-in module interfaces with the URL generation manager; wherein each plug-in module obtains information from one or more of the databases regarding a particular type of device data source or target, wherein each plug-in module is capable of automatically generating URLs to reference a particular type or class of device data source or target.

56. (Original) The memory medium of claim 48, wherein the memory medium further stores an application program operable to receive a generated URL, connect to the data source or target identified by the URL, and perform at least one of read data from the data source or write data to the data target.

57. (Original) The memory medium of claim 56, wherein the application program comprises a data socket client, wherein the data socket client uses the URL to connect to the data source or target identified by the URL.